

21 August 2010 R/V Ferrel Status Report, Cruise 7 – Day 3

Compiled by Zach Weber, Chief Scientist

1.) Site Conditions, Daily Activities and Sampling Locations

The Ferrel spent the day approximately 158 miles South West of the MC-252 wellhead conducting casts along transect 18 as directed in the Mission Guidance. The Ferrel arrived to its first sample location at 0650 156 miles South West of the wellhead and sampled three locations: Transect 18 Station 8, Transect 18 Station 9, and Transect 18 Station 10. Average weather conditions: Air Temperature 87 degrees Fahrenheit, seas 1-2ft, current .5kt out of the North East, winds 5-10kts out of the South South West, and cloud coverage remained around 30% throughout the day. Three CTD casts were undertaken to try to locate and sample remnants of the dispersed oil plume that may be around the 1150m depth but no evidence showing impact deeper than 1400m as indicated by a dip in dissolved oxygen levels and a rise in fluorescence in the water column. The cast (T18 S8) was conducted with a reading of 1264m of depth to the seabed. The cast showed no visible peak in fluorescence, but did show an unusual drop in temperature and spike in dissolved oxygen simultaneously at 1200m extending to the sea bed. The cast (T18 S9) was conducted with a reading of 1396m of depth to the sea bed. The cast showed no visible peak in fluorescence, but did show slight depressions in dissolved oxygen one of which had a broad range extending approximately 92m. The cast (T18 S10) was conducted in water exceeding the total recommended CTD cast depth, showed no visible peak in fluorescence, but did show a slight depression in dissolved oxygen. Field analyses included dissolved oxygen, fluorescence, temperature, pH and salinity. Water samples were also collected for further chemical and microbiological analyses at three depths on each of the casts (at 950m, 1150m, and 1250m on cast 1, 1000m, 1150m, and 1300m on cast 2, 1000m, 1190m, and 1300m on cast 3). In addition, surface water samples were collected for microbiological analyses at all three locations.

The results of the CTD casts were:

Station	Position from wellhead	Fluorescence signal	Signal depth	Comment
BP-TN14-SS01 (T18 S8)	156 miles SW	None	N/A	DO spike of 0.2mg/l and temp. dip of 0.3 deg. C at 1200m. Total CTD cast depth 1254m.
BP-TN14-SS02 (T18 S9)	159 miles SW	None	N/A	DO decline with one narrow and one broad depression of 0.2 mg/l at 1060m and 0.4 mg/l at 1128m. Total CTD cast depth 1384m.
BP-TN14-SS03 (T18 S10)	160 miles SW	None	N/A	DO decline with narrow depression of 0.2 mg/l at 1175m. Total CTD cast depth 1500m.

2.) Air Quality

Not required.

3.) Science Crew

Name	First Name	Affiliation	Role
Weber	Zach	CTEH	Chief Scientist
Weiland	Corey	Entrix	Water Sampler
Pelling	Ray	Entrix	Water Sampler
Smith	Craig	C&C	Party Chief Team
Burke	Emily	C&C	Oceanography Team
McLeod	Alex	C&C	Oceanography Team
Tidwell	Hearn	SHAW	Microbiologist
Chastain	Roger	SCRIPPS	Microbiologist
Reid	Francine	LBNL	Microbiologist
Summers	Kaitlyn	NOAA	Data Manager

